

WHAT IS CLAIMED IS:

1. A liquid detection method comprising:

a detection step of detecting electromagnetic
5 waves radiated from an area of a discharge path of
liquid discharged from a liquid supply source by using
a detection unit provided near the discharge path;

a minimize step of minimizing electromagnetic
waves radiated from a medium other than the liquid or
10 variation in the electromagnetic waves during detection
of the electromagnetic waves in said detection step;
and

a determination step of determining whether or
not the liquid is present and, if present, determining
15 the amount of the discharged liquid based on the
electromagnetic waves detected in said detection step.

2. A liquid detection apparatus comprising:

detection means, provided near a discharge path
20 of liquid discharged from a liquid supply source, for
detecting electromagnetic waves radiated from an area
of the discharge path;

suppression means for minimizing electromagnetic
waves radiated from a medium other than the liquid or
25 variation in the electromagnetic waves during detection
of the electromagnetic waves by said detection means;
and

determination means for determining whether or not the liquid is present and, if present, determining the amount of the discharged liquid based on the electromagnetic waves detected by said detection means.

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3. The apparatus according to claim 2, wherein:
the electromagnetic waves are infrared rays; and
said detection means is an infrared sensor.

10 4. The apparatus according to claim 3, wherein said suppression means is a shield provided in front of a source of infrared rays radiated from a medium other than the liquid.

15 5. The apparatus according to claim 3, wherein said suppression means is a housing that covers the infrared sensor and an infrared ray detection field of the infrared sensor.

20 6. The apparatus according to claim 5, wherein the housing is provided with an opening for passage of the discharged liquid.

25 7. The apparatus according to claim 5, wherein an air intake opening is provided on the housing, and a fan is provided at a position opposite the air intake opening on the housing so as to generate a steady air

flow inside the housing.

8. The apparatus according to claim 3, wherein the liquid includes ink.

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9. The apparatus according to claim 8, wherein:
the liquid supply source is an inkjet printhead;
and

the infrared sensor is located in front of ink
10 discharge nozzles on the inkjet printhead, near a
flight area of ink droplets discharged from the inkjet
printhead.

10. The apparatus according to claim 8, wherein.
15 the liquid supply source is an ink tank; and
the infrared sensor is located near a tube
connected to an outflow outlet provided in the ink tank.

11. A printing apparatus using a liquid detection
20 apparatus according to any one of claims 2-10,
comprising:

an inkjet printhead having an electrothermal
transducer which generates heat energy to be applied to
ink in order to discharge the ink by using the heat
25 energy; and

adjustment means for adjusting the temperature of
the ink for detection of ink droplet by the liquid

detection apparatus by sending an electric current into the electrothermal transducer.